MASS. ED21.2: Sch 68/4/990

School Achievement

How Massachusetts Students Measure Up

* UMASS/AMHERST *
312066 0271 3343 2

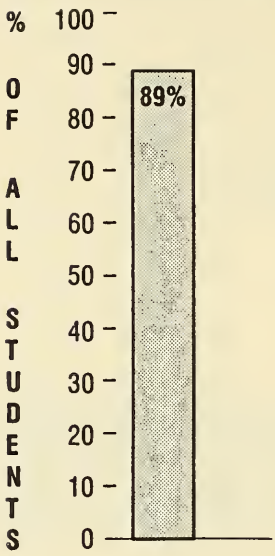
A Report on the 1990 Massachusetts Educational Assessment Program

Massachusetts Educational Assessment Program

Massachusetts Department of Education
November 1990

904/215

This pamphlet provides a general description of students at each level. The graphs next to each level show the average percentage of students who have attained the skills that characterize this level and above. For example, across the three grade levels tested, almost all students (approximately 89 percent) have attained the skills that are typical of the 950 level.



950 = Level I

GRADE FOUR

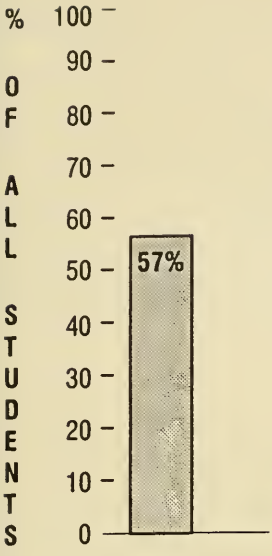
Students at this level are beginning to master the basic skills and concepts of the elementary school curriculum. They perform well when questions are set in contexts that they recognize as part of their experience and when material is presented visually.

GRADE EIGHT

Students at this level have mastered the skills and concepts of the elementary school curriculum; however, their understanding appears to be limited to the specific and practical. They perform best when questions are set in contexts that they recognize as part of their own experience.

GRADE TWELVE

Students at this level continue to perform best in a personal and practical context. They have acquired a set of academic skills that is useful in everyday life.



1250 = Level II

GRADE FOUR

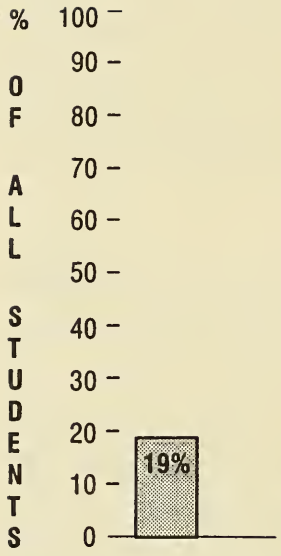
Students at this level are adept at the skills that constitute the main focus of the elementary school curriculum. Within familiar contexts, they show an ability to reason logically.

GRADE EIGHT

Students at this level have mastered much of the knowledge and skills that are typical of the taught curriculum. They are critical readers, evaluating material and recognizing assumptions. They are also adept at using visual material such as interpreting more advanced graphs, visualizing figures, and abstracting information from cartoons.

GRADE TWELVE

Students at this level show a greater maturity and a broader base of knowledge than eighth graders at the 1250 level; however, many of the characteristics of their thinking and some of their skills are comparable. In general, they are critical readers of text, but are less adept at integration and abstraction.



1550 = Level III

GRADE FOUR

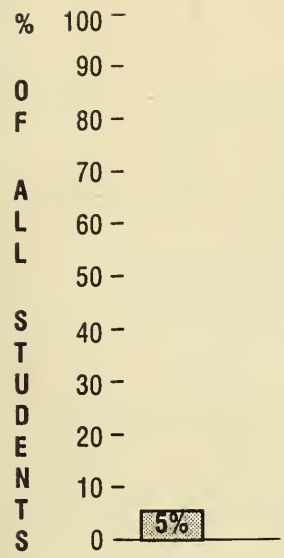
Students at this level are keen observers, paying attention to details. At the same time, they are beginning to think in terms of larger systems. This ability to recognize abstractions allows them the confidence and flexibility to reason through complex word problems, analyze content, and distinguish between necessary and irrelevant detail.

GRADE EIGHT

Students at this level think in terms of systems rather than discrete components. At the same time, they show a great attention to detail and a persistence in working through material. In addition, they are able to evaluate possible solutions by discriminating among nuances of meaning. They go beyond the taught curriculum to relate information from many sources.

GRADE TWELVE

Students at this level are primarily distinguished by their use of conceptual and logical analysis to solve problems. They also show a great attention to detail and can integrate information from the text itself, from other reading, and from their own experience in their construction of meaning. They possess a broad base of academic knowledge, both in history and in all major areas of science, and they are able to integrate and apply this knowledge to problem situations.



1850 = Level IV

GRADE FOUR

Students at this level have acquired a broad knowledge that goes beyond the taught curriculum and show an ability to use that knowledge as tools for logical analysis and reasoning.

GRADE EIGHT

Students at this level not only possess a broad base of detailed information about the subject areas tested, they are distinguished by their ability to analyze material and reason from it. Furthermore, in all areas, they possess an extensive vocabulary of technical terms that is appropriate to the subject.

GRADE TWELVE

Students at this level use a broad and detailed base of knowledge and understanding to solve problems and to construct meaning. They appear to have mastered all the elements of the secondary school curriculum in the subjects tested. They recognize the meaning of specialized terms in economics, as well as in other areas. Most striking is their independence in thinking.

The scaled scores which were developed for reporting school and district results on the Massachusetts Educational Assessment Program enable us to make valid and accurate comparisons. They provide a measure of each school's achievement relative to that of every other school in the state. However, they do not describe the actual achievement of students in those schools, and they can even foster misinterpretation. For example, relative to the state as a whole, a school may receive a high score in chemistry although its students may answer few of the chemistry questions correctly. Although the students in this school may be **perceived** to perform well in chemistry, their high score is due, not to their own achievement but to other students' **lack** of achievement.

In order to relate school scores on the MEAP to actual achievement, proficiency levels have been included in the school reports. They are introduced to add some meaning to the scaled scores, which have no inherent meaning of their own.

Four levels of proficiency are defined: 950, 1250, 1550, and 1850. Descriptions for each level were developed by committees of Massachusetts teachers who were presented with sets of test questions that were answered correctly by a substantial majority of students at a given level, but were answered incorrectly by students at the next lower level. The committees reviewed these sets of questions to identify and describe the common skills represented by each set.

This pamphlet provides a general description of students at each level. The graphs next to each level show the average percentage of students who have attained the skills that characterize this level and above. For example, across the three grade levels tested, almost all students (approximately 89 per-

cent) have attained the skills that are typical of the 950 level. The remaining 11 percent have not, with fewer students reaching this level at the twelfth grade than at the other grades. The majority of students (57 percent) have reached the 1250 level of proficiency or above, while 43 percent remain below this cut-off point. The other two levels are represented by far fewer students. For example, only 19 percent of students have reached the 1550 level and 5 percent have reached the 1850 level of proficiency.

In reviewing these capsule descriptions of students at the various levels of proficiency, it is apparent that students at the same level in different grades are characterized in much the same manner. This does not mean that they perform in identical ways. The material that they were responding to was appropriate for their grade level and, therefore, differed. It was their approach to the material presented that was similar. For example, although twelfth grade students at the 950 level are reading longer passages of more sophisticated content than fourth grade students at the corresponding level of proficiency, both rely upon common sense and their own personal experience for understanding. Similarly, the amount of detailed information possessed by 1850 students at all grades suggests an intellectual curiosity that extends far beyond the taught curriculum.

Although the styles of thinking that characterize each level are similar across grade levels, the types of skills and content knowledge differ. In some cases, such as reading, there is a steady progression in the length and complexity of the material which students understand. In other, such as science and social studies, questions that were answered correctly only by students at the 1550 or 1850 level in a lower grade were answered by students at the 1250 level at a

higher grade. Often this is because, at the lower grades, these questions concerned concepts that were not explicitly taught. The younger students who answered correctly had to rely upon critical appraisal and analysis, while the responses of the older ones were more likely to represent factual information that had been taught, knowledge that has been accumulated as a result of life experience, or wider reading. On the other hand, in mathematics there was relatively little change in the skills and concepts which characterized eighth and twelfth grade students at the 1250 level. This may represent the influence of tracking that is particularly prevalent in school mathematics.

A more detailed description of the content knowledge and skills for each subject area is presented in a separate publication, **Description of the MEAP Proficiency Scales**, which is available from the Massachusetts Educational Assessment Program, Department of Education, 1385 Hancock Street, Quincy, MA 02169.